Title: "The Development and Recognition of Research in the Architectural Profession: An Australian Update"

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Abstract.

This paper examines the role of research within the architectural profession. It reports on the current development of a Research Policy by the Royal Australian Institute of Architects and how this policy fits within a national exercise of research priority setting being undertaken by the Australian Federal Government. It discusses the profession's developing recognition of the necessity and value of research. The challenges of having the work of the architect understood and valued under the terms set by research funding and assessment bodies are discussed. While the paper deals specifically with the architectural profession, it highlights some of the difficulties faced by the humanities in relation to the development and recognition of research activity.

The Development and Recognition of Research in the Architectural Profession: An Australian Update.

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Definitions of architectural research and its role within the profession.

Parties interested in architectural research define the activity in different ways. The Initiative for Architectural Research (IAR) is a joint program of the Association of Collegiate Schools of Architecture (ACSA), American Institute of Architects (AIA), and Architectural Research Centers Consortium (ARCC). The IAR aims to provide a singular voice advocating for the varying complexity and breadth of research being conducted by architectural practitioners, academics, and members of the building industry (Initiative for Architectural Research, 2002). In defining architectural research, the IAR adopt a practical, applied approach, stating that it is "the search for new knowledge and ideas about building/construction technology, environment-behaviour studies, history of architecture and/or computer technology" (Ahrentzen, Betrabet, Dally Geboy, and Dearborn-Karan, 2001). A more generic definition is offered by the International Union of Architects (UIA), who describe research and innovation in architecture as "systematic inquiry, the result of which is new knowledge" (International Union of Architects, 2002, p.18). Groat and Wang (2002, pp.6-7) repeat this definition that encompasses systematic inquiry and new knowledge, and rightly acknowledge that the development of architecture from earliest times has involved forms of research activity. The primitive development of structural forms and building materials was the result of trial and error experimentation and systematic observation. This type of research, which clearly continues today, concerns itself directly with the

challenges of a particular building project, and applies the knowledge gained through experience to the next project that follows. The conduct of research outside the confines of specific building projects sees the area of architectural research maturing and expanding into a broad range of topic areas. Groat and Wang (2002) suggest that throughout this century the emphasis within architectural research has shifted, with particular fields gaining prominence, followed by the emergence of new areas of interest. This evolutionary development has included the climate and structural studies of the 1950s, the socio-behavioural, design methods and energy conservation work in the 1960s and 1970s, the critical theory of the 1980s and more recently, studies addressing sustainability and virtuality. Research in architecture continues to expand its horizons and extend its list of interests, making a singular, list-like definition somewhat illusive.

Defining architectural research, however problematic, is usually the first stage in an earnest discussion of the importance of research to the future of the architectural profession. The UIA state that the constant improvement of knowledge must be on every architect's agenda if the profession is to meet its responsibilities to go beyond the simple exercise of applying skills to a particular project. Research is a pre-requisite for the architect's engagement with the broader society.

> To deal with complex urban, technological, economic and cultural aspects of their work, to deserve the place it has in society, and to fulfil its own self-image, architecture must develop and enrich its own knowledge base, make its discourse more consistent, and the evaluation of itself and its products more systematic.
>
> (International Union of Architects, 2002, pp.18-19).

The growing complexity of the architect's activity is recognized by Groat and Wang (2002, p.8) as a key reason for architects to be involved in ongoing research. Architectural practice increasingly involves unfamiliar circumstances beyond the expertice of the individual practitioner, and, indeed, beyond the conventional collective wisdom of the profession as a whole. There once was a time when the role and the function of the architect within the building industry was clearly defined and essentially stable. This time has been replaced by an increasingly complex era of new building types, new building systems and products, new procurement methods, new urban problems, new global environmental issues and concerns. If the architectural profession is to maintain its expertice over the specialist body of knowledge associated with the

practice of the profession, then the development of new knowledge, that is, research, is an essential activity.

Establishing a research policy for the Royal Australian Institute of Architects.

The Royal Australian Institute of Architects has always seen research within the profession as important. Yet, until recently, research has been discussed, in policy terms, in a somewhat peripheral manner. Mention is made to research type activities in other associated policies, such as the Education Policy (Royal Australian Institute of Architects, 2002). Within that policy, the discussion of research tends to be rather indirect. The need for vigorous, adaptive minds, capable of accommodating rapid change is stated. The skills of the researcher, such as the ability to exercise problem definition and formulate strategies for action, the ability to gather information and apply analysis and critical judgement and the ability to utilize divergence, speculation, iteration and reflection in the elucidation of issues, are discussed under the performance criteria of "Design Integration", rather than within a research framework. This oversight is now being addressed through the development of a research policy for the Institute.

The objectives of this proposed policy go beyond the issue of how the education of architects might address the development of research skills. It is suggested that research must come to underpin practice, and that a strengthened research culture will extend the area of influence of architects within the community. An important part of the drafting of the policy will be the identification of strengths and weaknesses within practice, and the development of strategies by which private sector and academic researchers might address these areas. It is anticipated that a draft of the policy will be completed by March 2003.

There is a sense behind these objectives that both the profession, and the architectural academy, are currently failing in research terms. This sense is borne out by some of the unpublished preparatory research related to the writing of the policy by one of the State Chapters of the RAIA. Their investigations suggested that there existed a significant schism between the knowledge needs of practice, and the research activities currently underway in the universities. This situation,

along with a perceived absence of any strong research culture amongst practitioners, was felt to be undermining the quality of architectural production.

These findings fit well with a major pilot study recently undertaken in the United States by the Initiative for Architectural Research (IAR) (Ahrentzen, Betrabet, Dally Geboy, and Dearborn-Karan, 2001). One of the long-term goals of the IAR is to bridge architectural research training with practice and the research needs of architectural firms and related industries. The two central questions driving the pilot study were what types of training for architectural research currently exist, and what types are in demand and in operation in practice. Interestingly, there is a vague sense of mismatch between practice and the academy in the response to these questions, similar to that identified by the RAIA study. The study shows that product-related research dominates practice, yet this type of research activity receives little formal attention in research courses within the Schools of Architecture. Subsequently, the most prominent source of research education for architects in practice is vendor-sponsored workshops associated with products. This finding is not unexpected, given the applied nature of architectural practice and the need for practice to have access to up-to-date technical information. Yet should there not be concern when vendor-sponsored workshops become the most prominent, and often sole source of research training amongst practitioners? What role does the architectural education system have in establishing research skills that recognize the value of critical assessment and objective comparison? The IAR pilot study has generated as many interesting questions as it has answered. What type of research training might be most useful for practicing architects? Asking such questions is an essential step in establishing a strong and sustainable research culture within the profession. It is hoped that the development of the RAIA policy on research will supply answers to some of these questions.

The setting of national research priorities.

The preparation of the RAIA Research Policy is happening concurrent to, but somewhat separate from, the setting of National Research Priorities by the Australian government. The Department of Education, Science and Training (DEST) is overseeing this challenging and clearly necessary process (Department of Education, Science and Training, 2002a). No government, particularly

one as relatively small as Australia, can afford to spend money indiscriminately on research. The DEST exercise aims to identify and target areas of strength, opportunity or need in which a shift in national research effort and a "whole-of-government" approach would make a significant contribution to national well-being (Department of Education, Science and Training, 2002a). The setting of priorities will guide research funding decisions across a range of government-funded research bodies.

The priority setting exercise being undertaken by the government has many encouraging features when considered in relation to the growth and promotion of architectural research. The priorities exercise is based on a dichotomous description of research with science, engineering and technology research (SET) on the one hand, and social sciences and humanities (SS&H) research on the other. It is rightly noted by the government that in order to address many of the challenges that the future will bring, a mix of SET and SS&H research may be required (Department of Education, Science and Training, 2002a). The need for collaborative research activity is clearly expressed in the government's discussions, as is the value of a multi-disciplinary approach. It is something of a truism to note that architecture ably spans both SET and SS&H research. Working successfully within multi-disciplinary teams in a collaborative spirit is a trait of exemplary architectural practice. These skills potentially distinguish the architectural researcher as a strong player in a collaborative research setting. All appears most encouraging.

Yet along with these positive signs, there are also significant challenges for architectural research in the priority setting exercise. Despite the apparent even-handed support for SET and SS&H research, and despite architecture's ability to address both types of research, there is, somewhat inevitably, a subtle bias towards the scientific paradigm within the priority setting exercise. This predisposition may in the end disadvantage many types of architectural research that are more qualitative in nature. Two simple examples illustrate this bias. Firstly, in discussing specific government policy initiatives, it is noted that the Commonwealth Government has announced four discipline priorities for the 2003 Australian Research Council grants round: nano- and bio-materials, complex/intelligent systems, photon science and technology, and genome-phenome research (Department of Education, Science and Training, 2002a). It is not only the architectural

discipline, but indeed all areas of the humanities, that must wonder about the setting of such strongly scientific priorities. The second illustration involves the Expert Advisory Committee that has been recently set up by the Federal Minister for Science to assess and develop a shortlist from the nominations for national research priorities received from the community. It is the composition of the committee that is worthy of comment. Of the twelve appointees, ten are strongly associated with scientific and technological research. The two "humanities" people are outnumbered by experts in the fields of genomics and gene technology, electrical engineering and quantum electronics, climate change and the molecular genetics of haemopoietic neoplasia. This perceived bias toward the scientific may be explained by the fact that the priority setting in 2002 will focus on SET research, and SS&H priorities will be developed in 2003-2004. Yet all stakeholders, both SET and SS&H, are in the process of making submissions to this committee. All are being engaged in the consultations being overseen by this expert committee. Perhaps the government anticipated allegations of bias when they noted that the committee was composed of persons "who have a capacity to assimilate issues beyond the scope of their own field and background, including relevant social, commercial, economic and environmental issues" (Department of Education, Science and Training, 2002b). It is unclear as to whether or not another set of experts is to be appointed in 2003-2004, or whether the current team of scientists/technologists will be considered adequate to continue in this priority setting role when the emphasis shifts from SET to SS&H research. It is interesting to consider the presumptions that underlay this bias. While it seems that scientists and technologists are more than capable of assimilating issues beyond their own areas of expertice, there seems little faith in those involved in the arts or the humanities to assimilate issues associated with science or technology.

Some might suggest that these concerns with the government's research priority setting exercise are somewhat petty or even paranoid. However, a major obstacle that faces architectural research in not only this current exercise, but also in a more general context, is the ability of the work of the architect to be understood and valued in the terms set by research funding and assessment bodies. A case in point is the process by which DEST distribute funding to the universities based on completed research (Department of Education, Science and Training, 2001). In their specifications for data collection, there are two categories under which an architectural design

might attract funding- Category H, "Refereed Designs", and Category J1, "Major Original Creative Works". To gain recognition from DEST, a refereed design must have received a major design award from a national or international organization in the field. While this covers completed built work, and sets a relatively high standard of achievement, there is much design work of a speculative and inquiring nature done by architects and academics that remains unbuilt, and subsequently unable to be recognized by DEST under category H. This oversight has been partially addressed within the Australian system by a process of peer review established by CHASA, the group representing the Heads of Architecture Schools in Australasia (now known as the Association of Architecture Schools of Australasia or AASA). This system of peer review of design projects supports the notion that the creative production of the architect can be considered to be a form of systematic inquiry that leads to the creation of new knowledge, that is, research. In a similar manner, it is difficult for design work to be recognized under the "Major original creative works" category. This category refers to curated individual exhibitions of original art. It excludes "exhibitions which have more than one exhibitor, even if one person is the main exhibitor" (Department of Education, Science and Training, 2001, p.41). This exclusion would disqualify many exhibitions that display the work of architects, as it is common for such shows to feature a selection of architects. For instance, if an architect's work was selected to be displayed in a group show at the Australian pavilion at the Venice Biennale, as has been done in the past, then this would not be considered legitimate and recognizable research under the guidelines. One begins to wonder what an architect would have to do, in DEST's view, to be seen to be making a significant contribution to the field of architectural knowledge.

Some concluding remarks.

None of the activities discussed above- the drafting of an RAIA research policy, the setting of national research priorities, the development of methods by which architectural work might be recognized as research- occur independently. Nor do they occur autonomously of larger societal forces at play. The university system within Australia is in a period of review and it is anticipated that there will be sweeping changes introduced in the coming year (Department of Education, Science and Training, 2002c). There is much discussion regarding the need for diversity and differentiation amongst the different universities throughout the country. While this appears to be

a reasonable suggestion, there is some concern that the idea of differentiation might eventually lead to the creation of two types of universities- ones that teach, and ones that research. Clearly such a separation would threaten the development of a strong research culture within the architectural profession and its academy. It would create an unhelpful and unrealistic separation between the teaching of architecture and the researching of architecture. It would separate the development of new knowledge, and the dissemination of that knowledge. It would only exacerbate the division that is seen to exist between the research activities of the universities, and the knowledge needs of the profession. By continuing to discuss and develop the role and value of research, it is hoped that such threats can be averted by the profession.

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